



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,503	03/15/2004	Thomas A. Nance	Westinghouse 020092.00063	9356
27863	7590	07/28/2004	EXAMINER	
MCNAIR LAW FIRM, PA P.O. BOX 10827 GREENVILLE, SC 29603-0827			BARNEY, SETH E	
			ART UNIT	PAPER NUMBER

3752

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/800,503

Applicant(s)

NANCE ET AL.

Examiner

Seth Barney

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: Reference number 6 to the --nipple-- on page 10, line 2 of the specification is not located on any drawings. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 13 and 14. Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be

Art Unit: 3752

labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities: Line 10, paragraph 30, of page 10 refers to (16) as a clamp then immediately following refers to (16) as a collar.

Appropriate correction is required.

### ***Claim Objections***

4. Claims 2 and 4 are objected to because of the following informalities: The water flow control valve in claim 2 and the flange in claim 4 are not clearly disclosed in the specification. The relationship between the flange in claim 4 to the --cover plate-- and --rubber gasket-- in the specification is not clear. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3752

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,419,922 to Bajek in view of U.S. Patent No. 4,690,327 to Takai, in view of U.S. Patent No. 5,561,883 to Landry, and in view of U.S. Patent No. 4,272,989 to Rymarchyk..

Bajek discloses:

- a nozzle boom (58) attached to the bottom of the water pipe and extends downward as seen in Figure 19. See column 5 lines 55 to 65.

- a nozzle assembly (34) that is connected to the nozzle boom (58) for pivotal movement as seen in Figures 12-14. See column 6 lines 54 to 68.

- a piston rod (234) and a piston assembly (236) that can be used to raise and lower the nozzle and can be seen in figures 12-14.

- hydraulic and pneumatic means (148) to control the movements of the pivotal parts. See column 5 lines 50 to 55 and column 10 lines 10-27.

- a water supply tube (32) connecting from the top boom to the nozzle.

- a lower support tube (46) to support the water supply tube.

Regarding claim 1, Bajek discloses a gunning apparatus (18) to repair the refractory lining (12) of a refractory vessel (10), which can be used to spray water (See column 2 lines 5-6).

Bajek does not disclose lift bail means for positioning the structure, a protective pipe that contains a water supply pipe, a uniform diameter mast, or a camera mounted

Art Unit: 3752

on the nozzle. Additionally, the mast of Bajek has a separate water supply hose externally attached to the mast.

Takai discloses a lining apparatus having an inner water pipe (21) that is coaxial with an outer tube housing (22). It would have been obvious to provide the upper mast of Bajek with the coaxial water pipe as taught by Takai in order to provide a more compact configuration to allow for cleaning of small diameter pipes or tanks by removing the disadvantage of the bulky externally attached water supply hose. The lower mast containing the nozzle assembly would continue using a hose attached to the supply pipe in order to maintain nozzle motion.

Further regarding claim 1, Landry discloses a tank cleaning system (12) that sprays cleaning fluid or water having a camera assembly (14) attached to the spray nozzle (13). The camera rotates with the nozzle, which is driven by hydraulic actuator (13A). It would have been obvious to provide the mast of Bajek with a camera as taught by Landry in order to monitor the spray during operation of the system. See column 3 lines 58 to 64. Furthermore, it would be obvious for the camera to have been of a submersible type because the nozzle emits a strong spray of pressurized water that would splash back.

Additionally, Rymarchyk discloses a lance assembly for insertion into a steelmaking vessel having a bail for lifting and rotating. It would have been obvious to provide the mast of Bajek with a bail as taught by Rymarchyk to easily change the height of the nozzle.

Art Unit: 3752

Regarding claim 2, as aforementioned, the mast of Bajek modified with the water supply pipe of Takai would have required a water supply tube connected from the supply pipe to the nozzle in order to retain the nozzle motion. Additionally, a water control valve is known in the art for a water flow system.

Regarding claim 3, as aforementioned, Bajek disclose a nozzle pivotally connected to a mast support plate (46) by a support beam (58) supplied with pneumatic means.

Regarding claim 6, the mast of Bajek would have the nozzle at the lower end of the mast when the mast is in the compacted position.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bajek in view of Takai, Landry, Rymarchyk, and further in view of U.S. Patent No. 3,599,871 to Ruppel.

None of the previous patents disclosed means of securing the tank inlet to block fluid splashback. Ruppel discloses a cylinder (70) with a flanged portion (71) that is attached to the opening of the vessel. It would be obvious to provide the mast of Bajek with the cylinder as taught by Ruppel in order to prevent splash back of possibly hazardous materials. See column 3 lines 71 to 74.

***Allowable Subject Matter***

8. Claim 5 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3752

9. Claim 7 allowed.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,301,998 to Rodway discloses a gunning apparatus with a camera.

U.S. Patent No. 4,570,909 to Hiroki discloses a lining apparatus having a strut with inner and outer shells to retain several hoses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seth Barney whose telephone number is (703) 308-2603. The examiner can normally be reached on 8:30am-5:00pm (Mon-Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703)308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Art Unit: 3752

Seth Barney  
Examiner  
Art Unit 3752

SB

*Seth Barney 7/23/2004*

A handwritten signature in cursive script, appearing to read "Michael Mar".

MICHAEL MAR  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700